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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/423,179	11/02/1999	DIETER ZWEIGLE	K-53885	6456

7590 10/06/2004

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EXAMINER
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GARLAND, STEVEN R

ART UNIT	PAPER NUMBER
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2125

DATE MAILED: 10/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/423,179	<b>Applicant(s)</b> ZWEIGLE, DIETER	
	<b>Examiner</b> Steven R Garland	<b>Art Unit</b> 2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 18-26 and 28-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-26 and 28-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. The substitute specification filed 6/28/04 has not been entered because it does not conform to 37 CFR 1.125(b) and (c) because: no clean copy of the specification has been supplied in addition to the marked up copy which was supplied.
2. The disclosure is objected to because of the following informalities: proper headings such as Brief Description of the Drawing; Detailed Description; Background of the Invention; etc should be used.

Appropriate correction is required.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 18,19,22-26, and 28-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nevel et al. 6,130,746 in view of Riley et al.4,803,531.

Nevel et al. teaches measuring yarn diameters, use of a input device to input the structure of the fabric, control of an optoelectronic measuring device, computing the woven fabric structure on the basis of the measured data, display of the developed fabric and display of actual fabric based on the measurements, use of multiple detection elements, statistical evaluation, 3D display of data, use of a printer, computer, and graphical display. See the abstract, figures, col. 2, lines 29-65; col. 3, line 1 to col. 4, line 39; col. 5, line 66 to col. 6, line 51; col. 7, line 19 to col. 9, line 27; and col. 10, lines 14-65.

Art Unit: 2125

Nevel however does not specifically state that the control and evaluation device ( comprising the computer ) controls the measuring device or the type of interfacing used. Nevel does teach that the system determines the length and also the number of readings to be taken. Nevel also does not specifically state "changing " the actual fabrics so that the actual fabrics are " adapted and optimized " to the measured diameters and input woven fabrics. Nevel however does display the fabric based on the measurements and input fabrics and which is changed based on the measurements which obviously includes the yarn diameters. Further Nevel does teach adjusting the fabric on the basis of the measurements and the input pattern, but does not specifically mention the diameter. Note col. 8, lines 16-55 and col. 7, lines 23-39.

Riley et al. teaches the use of a parallel interfacing to connect a CCD to a computer. See the col. 2, lines 17-27.

It would have been obvious to one of ordinary skill in the art to modify Nevel in view of Riley to use a parallel interface to supply the CCD measurement data to the computer at a high data rate or in the alternative to use a serial interface for low cost but at a slower data transfer rate. Both types of interfaces serial and parallel are notoriously well known to those of ordinary skill in the computer arts.

It would have been obvious to one of ordinary skill in the art to modify Nevel and Riley to have the control and evaluation device control the measurement device so that the proper number of readings could be taken and at the proper locations without the operator having to do manual computations and then enter them.

Further it would have been obvious to one of ordinary skill in the art to modify Nevel and Riley to optimize the produced fabric on the basis of the measured data including the diameter data and input fabric pattern in view of the teachings of Nevel so that less defective fabric is produced on a different sized loom.

In response to applicant's arguments the term "serial/parallel" has been interpreted to mean " serial and/or parallel " so that only a serial or parallel interface is required to meet the limitation.

5. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nevel et al. 6,130,746 in view of Riley et al. 4,803,531 as applied to claims 18,19,22-26, and 28-34 above, and further in view of Massen 4,887,155.

Nevel et al. teaches measuring yarn diameters, use of a input device to input the structure of the fabric, control of an optoelectronic measuring device, computing the woven fabric structure on the basis of the measured data, display of the developed fabric and display of actual fabric based on the measurements, use of multiple detection elements, statistical evaluation, 3D display of data, use of a printer, computer, and graphical display. See the abstract, figures, col. 2, lines 29-65; col. 3, line 1 to col. 4, line 39; col. 5, line 66 to col. 6, line 51; col. 7, line 19 to col. 9, line 27; and col. 10, lines 14-65.

Nevel however does not specifically state that the control and evaluation device ( comprising the computer ) controls the measuring device or the type of interfacing used. Nevel does teach that the system determines the length and also the number of readings to be taken. Nevel also does not specifically state "changing " the actual

Art Unit: 2125

fabrics so that the actual fabrics are " adapted and optimized " to the measured diameters and input woven fabrics. Nevel however does display the fabric based on the measurements and input fabrics and which is changed based on the measurements which obviously includes the yarn diameters. Further Nevel does teach adjusting the fabric on the basis of the measurements and the input pattern, but does not specifically mention the diameter. Note col. 8, lines 16-55 and col. 7, lines 23-39.

Riley et al. teaches the use of a parallel interfacing to connect a CCD to a computer. See the col. 2, lines 17-27.

It would have been obvious to one of ordinary skill in the art to modify Nevel in view of Riley to use a parallel interface to supply the CCD measurement data to the computer at a high data rate or in the alternative to use a serial interface for low cost but at a slower data transfer rate. Both types of interfaces are notoriously well known to those of ordinary skill in the computer arts.

It would have been obvious to one of ordinary skill in the art to modify Nevel and Riley to have the control and evaluation device control the measurement device so that the proper number of readings could be taken and at the proper locations without the operator having to do manual computations and then enter them.

Further it would have been obvious to one of ordinary skill in the art to modify Nevel and Riley to optimize the produced fabric on the basis of the measured data including the diameter data and input fabric pattern in view of the teachings of Nevel so that less defective fabric is produced on a different sized loom.

Nevel and Riley however do not teach the use of an infrared sensor or disclose the accuracy of the measuring device. .

Massen teaches the use of infrared sensing for increased measurement accuracy and synchronizing a strobe light and the measurement device. See the figures; col. 2, lines 36-41; col. 4, line 52 to col. 5, line 12.

It would have been obvious to one of ordinary skill in the art to modify Nevel and Riley in view of Massen and use an infrared measurement device for increased measurement accuracy.

Further it would have been obvious to one of ordinary skill in the art to modify Nevel and Riley in view of Massen to adapt the system to measure the yarn to the required accuracy so that the fabric can be accurately displayed and the various flaws accurately detected.

In response to applicant's arguments the term "serial/parallel" has been interpreted to mean " serial and/or parallel " so that only a serial or parallel interface is required to meet the limitation.

6. Remarks: it is suggested that instead of merely claiming "serial/parallel" interfacing as in the instant amendment that the claims be amended so that it is emphasized that the measuring device supplies data using a parallel interface, but at the same time the measuring device is controlled using a serial interface in the claimed combination. See page 4, lines 20-25 of the original specification.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

Art Unit: 2125

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven R Garland whose telephone number is 703-305-9759, after 10/13/04 at 571-272-3741. The examiner can normally be reached on Monday-Thursday from 6:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard, can be reached on 703-308-0538 after 10/12/04 at (571)272-3749. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.



Art Unit: 2125

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

506

STEVEN GARLAND

A handwritten signature in cursive script, appearing to read "L. Picard".

LEO PICARD  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100